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Substitute Specification

Application No. 10/777,196

LINEAR MOTOR, MOVING STAGE SYSTEM, EXPOSURE
APPARATUS, AND DEVICE MANUFACTURING METHOD

FIELD OF THE INVENTION AND RELATED ART

[0001] This invention relates to a linear motor suitably usable as a drive source for a stage system being incorporated into an exposure apparatus, for example, for producing semiconductor devices, for example. In other aspects, the invention concerns a stage system, an exposure apparatus, and a device manufacturing method, all using such a linear motor.

[0002] Japanese Laid-Open Patent Application No. 2002-325421, for example, shows a linear motor in which magnets and coils are moved relative to each other, by means of a Lorentz's force produced therebetween.

[0003] This linear motor comprises (i) a first magnet group having a plurality of first magnets disposed so that their polar directions are periodically opposed to each other and a plurality of second magnets disposed, in juxtaposition with the first magnets, so that their polar directions are periodically opposed to each other, and (ii) a second magnet group having a plurality of third magnets disposed so that their polar directions are periodically opposed to each other and a plurality of fourth magnets disposed, in juxtaposition with the first magnets, so that their polar directions are periodically opposed to each other, these components being